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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,695	12/17/2003	William Keith Fisher	1001.009	5799

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BRENC LAW
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SIMSBURY, CT 06070

EXAMINER

NAKARANI, DHIRAJLAL S

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/736,695	Applicant(s) FISHER, WILLIAM KEITH	
	Examiner D. S. Nakarani	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/03, 2/04, 7/04, § 5105</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-48 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for claimed domains comprising microcapsules, wherein microcapsules comprising polymer shell made of polymers recited in claims 4, 14 or 31 and core comprising agent(s) recited in claims 6, 16 or 33 dispersed in liquid dielectric material(s) recited in claims 5, 15 or 32, does not reasonably provide enablement for domains comprising microcapsules, wherein microcapsule comprising shell made of polymers recited in claims 4, 14 or 31 and core comprising organic agent dispersed in solid polymers. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Invention as claimed is broader because in order to alter amount of visible light that can be transmitted through polymer sheet in response to the application of an electric field agent has to move in the core of claimed microcapsules. If the dielectric agent is solid, the agent may not have required mobility for altering amount of visible light on application of electric field.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4, 11-26, 28-42 and 44-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4, 14 and 31, line 3, the word "dierivatives" should read --derivatives--, line 4, the phrase "methyl vinyl ether co-maleic anhydride" should read -- methyl vinyl ether co-maleic anhydride copolymer--, line 6, the phrase "melamine formaldehyde, urea formaldehyde" should read -- melamine formaldehyde resin, urea formaldehyde resin--, and lines 7-9, the phrase "water soluble oligomers of formaldehyde, -----and t-butyl acrylate" renders claims indefinite because it is not clear whether applicant is trying to claim water soluble oligomer of all recited monomers or something else. Clarification and/or correction requested.

Claims 11-26 and 28-42 are directed to a multiple layer glass panel and claims 44 are directed to a method requiring a multiple layer glass panel. However none of these claims glass layers therefore cannot be understood.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 1773

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 11-18, 21-24, 28-40 and 44-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawai (U. S. Patent Application Publication US 2003/0086149 A1).

Kawai discloses electrophoretic device (Fig.1) comprising glass or polyethylene terephthalate layer 1 with electrically conductive layer 2 and glass or polyethylene terephthalate layer 6 with electrically conductive layer 7 (Paragraphs 0042 and 0043), microcapsules dispersed in binder 5. The microcapsule comprises shell 3 dielectric liquid 4b (Paragraph 0045) and charged particles 4a such as titanium oxide, aluminum oxide, carbon black etc. (Paragraph 0044). The dielectric liquid includes aliphatic hydrocarbon, halogenated hydrocarbon, silicone oil etc. The binder 5 is an acrylic resin (Paragraph 0053). The resin for shell 3 includes urethane resin, melamine resin, urea resin etc (Paragraph 0046). Kawai discloses voltage source (Fig. 3).

8. Claims 1-8, 11-18, 21-24 and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai (U. S. Patent Application Publication US 2003/0086149 A1) in view of Duthaler et al (WO 03/050607 A1).

Kawai which has been discussed above fail to disclose other resins claimed in claims 4, 14 or 31 as shell 3 forming material, claimed dielectric materials such as claimed in claims 5, 15 or 32 and microcapsule binder resin such as claimed in claim 40.

Duthaler et al disclose electrophoretic device comprising similar microcapsules disclosed by Kawai. Duthaler et al disclose claimed shell forming resins (Page 51, line 26 to page 52, line 11). Duthaler et al disclose dielectric liquids claimed in claims (See page 45, line 21 to page 47, line 3). Duthaler et al disclose agent such titania, silicon oxide, aluminum oxide etc (Page 41, line 10 to page 42, line 8). Duthaler et al disclose binder resins such as claimed in the instant invention (page 54, line 21 to page 55, line 10).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize disclosure of Duthaler et al in the invention of Kawai to use Duthaler et al's shell forming resins, dielectric fluid and binder resins since they are used for similar application.

9. Claims 9-10, 19-20, 25-27 and 41-43 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims are deemed allowable because prior art does not teach or suggest claimed poly(vinyl butyral) sheet containing claimed microcapsules.

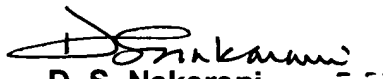
Art Unit: 1773

10. Receipt of Information Disclosure Statements filed December 17, 2003, February 11, 2004, July 21, 2004 and May 9, 2005 is acknowledged. All recited references have been made of record.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. S. Nakarani whose telephone number is (571) 272-1512. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


D. S. Nakarani
Primary Examiner
Art Unit 1773

Dsn
September 27, 2005